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10/791,569	03/01/2004	Takashi Ueno	04104CIP/HG	3119

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EXAMINER	
IP, SIKYIN	

ART UNIT	PAPER NUMBER
1793	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/791,569	UENO, TAKASHI	
	Examiner	Art Unit	
	Sikyin Ip	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *8/12/08;11/14/08*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-46* is/are pending in the application.

4a) Of the above claim(s) *1,3-8,10-17,19-44 and 46* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2,9,18 and 45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/12/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2, 9, 18, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 4818283 to Grunthaler et al, Xiao et al, or Chu et al.

Grunthaler discloses the features including the claimed Cu-Mo alloy (col. 1, lines 60-65) and electrode application, commutator segments and contacts (col. 4, lines 4-9).

Xiao discloses the features including the claimed Cu-Mo alloy and film application (page 354, Results and Discussion, lines 1-2). Chu discloses the features including the claimed Cu-Mo alloy (paragraph bridging pages 6462-6463) and electrode application (page 6462, Introduction). Since structure of claimed "sputtering target", "electronic device", or "electronic optical component" has not been defined, which is read on the products disclosed by cited references. Therefore, when prior art compounds essentially "bracketing" the claimed compounds in structural similarity are all known, one of ordinary skill in the art would clearly be motivated to make those claimed compounds in searching for new products in the expectation that compounds similar in structure will have similar properties. In re Gyurik, 596 F.2d 1012, 1018, 201 USPQ 552, 557 (CCPA 1979); See In re May, 574 F.2d 1082, 1094, 197 USPQ 601, 611 (CCPA 1978) and In re Hoch, 57 CCPA 1292, 1296, 428 F.2d 1341, 1344, 166 USPQ 406, 409 (1970). As stated in In re Peterson, 315 F.3d 1325, 1329-30, 65 USPQ2d 1379, 1382 (Fed. Cir. 2003), that "A prima facie case of obviousness typically exists when the ranges of a claimed composition overlap the ranges disclosed in the prior art". Therefore, it would have been obvious to one of ordinary skill in the art to select any portion of range, including the claimed range, from the broader range disclosed in a prior art reference because the prior art reference finds that the prior art composition in the entire disclosed range has a suitable utility. Also see MPEP § 2131.03 and § 2123.

With respect to the processing steps in the claims that the invention defined in a product-by-process claim is a product, not a process. In re Bridgeford, 357 F. 2d 679, 149 USPQ 55 (CCPA 1966) and MPEP § 2113. It is the patentability of the product

claimed and not of the recited process steps which must be established. See In re Brown, 459 F. 2d 531, 173 USPQ 685 (CCPA 1972). The guidance that has been provided by court on this matter is

> [i]f the product in a product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.

See In re Thorpe, 777 F.2d 695, 227 USPQ 964, 966 (Fed. Cir. 1985). When applicant's and prior art's products are to be identical or substantially identical, the burden shifts to applicant to provide evidence that the prior art product does not inherently possess the claimed properties. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977); In re Fessmann, 489 F.2d 742, 745 180 USPQ 324, 326 (CCPA 1974); and In re Fitzgerald, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980).

Claims 2, 9, 18, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over acknowledged prior art admission in view of USP 4818283 to Grunthaler et al, Xiao et al, or Chu et al.

Acknowledged prior art admission discloses

> ~~In~~ conventionally-used electronic devices and electronic components, wiring patterns and electrodes are formed by using a pure metallic material, such as Cu, Al, Ti, Mo, Ta, W and Cr, or a metallic alloy material, such as Al-Cu, Al-Cu-Si, Al-Pd, TaSi, WSi and TiN, as a material for wiring patterns, electrodes and contacts. "

except for the Cu-Mo alloy metallic contact. Grunthaler discloses the features including the claimed Cu-Mo alloy (col. 1, lines 60-65) and electrode application, commutator segments and contacts (col. 4, lines

4-9). Xiao discloses the features including the claimed Cu-Mo alloy and film contact (page 354, Results and Discussion, lines 1-2). Chu discloses the features including the claimed Cu-Mo alloy (paragraph bridging pages 6462-6463) and electrode application (page 6462, Introduction). The use of conventional materials to perform their known functions in a conventional process is obvious. In re Raner, 134 USPQ 343 (CCPA 1962).

With respect to the processing steps in the claims that the invention defined in a product-by-process claim is a product, not a process. In re Bridgeford, 357 F. 2d 679, 149 USPQ 55 (CCPA 1966) and MPEP § 2113.

Response to Arguments

Applicant's arguments filed November 14, 2008 have been fully considered but they are not persuasive.

Applicant argues that "USP 4,818,283 does not mention a sputtering target at all." But, instant claim 2 fails to define structure of recited sputtering target. Thus, sputtering target structure reads on an electrode of said reference. Moreover, applicant fails to show the Cu-Mo electrode of USP '283 cannot be functioned as sputtering target. Claims 9, 18, and 45 do not recite sputtering target. Said claims recite electrode as one of the options.

Applicant argues that "In USP 4,818,283, Mo is not uniformly dispersed in the copper alloy. ~~Because the binary alloy in USP 4,818,283~~ " But, it is immaterial because dispersion distribution has not been recited or defined.

Moreover, as is evinced by applicant's remark in paragraph bridging pages 4-5, that

> ~~target consisting essentially of a binary alloy" are~~ (i) Mo being uniformly dispersed in Cu and (ii) sputtering is used to produce a very thin film. This is what a person having ordinary skill in the art would know. "

Applicant's argument with respect to Chu is noted. But, examiner reiterates the response in paragraph immediately above. Moreover, there is no resistivity/conductivity is recited in any rejected claims.

Applicant's argument with respect to Xiao is noted. But, examiner reiterates the response in USP '283 above. Arguendo, Xiao sputters with two separate target materials. The co-sputtering targets of Xiao just read on claimed binary alloy sputtering target because there is no restriction of using powder/film alloys, for example.

Applicant argues that "

> ~~claim 9. That~~, Xiao et al. and Chu et al. do not teach or suggest a wiring pattern, an electrode or a contact formed by a sputtering target consisting essentially of a binary alloy including Cu and Mo, as recited in applicant's claim 9. Further, a sputtering target consisting essentially of a binary alloy including Cu and Mo as recited in applicant's claim 9 produces a Cu-Mo alloy thin film with a stable composition compared to the co-sputtering of Xiao et al. and Chu et al. "

But, it is immaterial because there is no thin film is being claimed as final product. An electrode or a contact reads on structures of any sputtered products.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

All recited limitations in the instant claims have been meet by the rejections as set forth above.

Applicant is reminded that when amendment and/or revision is required, applicant should therefore specifically point out the support for any amendments made to the disclosure. See 37 C.F.R. § 1.121; 37 C.F.R. Part §41.37 (c)(1)(v); MPEP §714.02; and MPEP §2411.01(B).

Examiner Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Ip whose telephone number is (571) 272-1241. The examiner can normally be reached on Monday to Thursday from 5:30 A.M. to 4:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Roy V. King, can be reached on (571)-272-1244.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Sikyin Ip/
Primary Examiner, Art Unit 1793

February 16, 2009